

Abstract

Method and apparatus for transporting Ethernet data packets via radio frames in a wireless metropolitan area network. A terminal includes a data packet receiver for receiving data packets for communication over a wireless link wherein not every data packet has a same length; a data packet formatting apparatus for formatting the data packets according to radio frames wherein the radio frames each have a same length and wherein the data packets are formatted into the radio frames such that boundaries for the data packets are not necessarily aligned with boundaries for the radio frames; and a wireless transceiver for communicating the radio frames over the wireless link. The packets can be Fast Ethernet packets. The terminal does not convert the Ethernet data packets into a telephony communication protocol or into an asynchronous transfer mode (ATM) protocol prior to communication of the radio frames over the wireless link. The terminal can include a data packet synchronizer for synchronizing the data packets to a clock signal associated with the radio frames. The data packets can be time-division multiplexed into the radio frames. According to another aspect, a method of transporting Ethernet data packets via radio frames includes steps of receiving Ethernet data packets wherein each data packet includes a preamble and a start-of-frame delimiter, stripping off the preamble and start-of-frame delimiter, formatting the packet data according to radio frames, including appending a synch field to the packet data, and appending a length field to the packet data.